

03-28-02

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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/066,320

DATE: 02/22/2002

TIME: 13:05:17

Input Set : A:\1818.1030-003 seq listing.txt  
Output Set: N:\CRF3\02222002\J066320.raw

ENTERED

4 <110> APPLICANT: Stamler, Jonathan S.  
5 Gow, Andrew J.  
6 Singel, David J.  
8 <120> TITLE OF INVENTION: Method for Determining Physiological  
9 Effects of Hemoglobin  
11 <130> FILE REFERENCE: 1818.1030-003  
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/066,320  
C--> 13 <141> CURRENT FILING DATE: 2002-01-31  
13 <150> PRIOR APPLICATION NUMBER: PCT/US00/21101  
14 <151> PRIOR FILING DATE: 2000-08-02  
16 <150> PRIOR APPLICATION NUMBER: US60/146,680  
17 <151> PRIOR FILING DATE: 1999-08-02  
19 <160> NUMBER OF SEQ ID NOS: 4  
21 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
23 <210> SEQ ID NO: 1  
24 <211> LENGTH: 11  
25 <212> TYPE: PRT  
26 <213> ORGANISM: Homo sapiens  
28 <400> SEQUENCE: 1  
29 Met Glu Glu Leu Gln Asp Asp Tyr Glu Asp Glu  
30 1 5 10  
33 <210> SEQ ID NO: 2  
34 <211> LENGTH: 911  
35 <212> TYPE: PRT  
36 <213> ORGANISM: Homo sapiens  
38 <400> SEQUENCE: 2  
39 Met Glu Glu Leu Gln Asp Asp Tyr Glu Asp Met Met Glu Glu Asn Leu  
40 1 5 10 15  
41 Glu Gln Glu Glu Tyr Glu Asp Pro Asp Ile Pro Glu Ser Gln Met Glu  
42 20 25 30  
43 Glu Pro Ala Ala His Asp Thr Glu Ala Thr Ala Thr Asp Tyr His Thr  
44 35 40 45  
45 Thr Ser His Pro Gly Thr His Lys Val Tyr Val Glu Leu Gln Glu Leu  
46 50 55 60  
47 Val Met Asp Glu Lys Asn Gln Glu Leu Arg Trp Met Glu Ala Ala Arg  
48 65 70 75 80  
49 Trp Val Gln Leu Glu Glu Asn Leu Gly Glu Asn Gly Ala Trp Gly Arg  
50 85 90 95  
51 Pro His Leu Ser His Leu Thr Phe Trp Ser Leu Leu Glu Leu Arg Arg  
52 100 105 110  
53 Val Phe Thr Lys Gly Thr Val Leu Leu Asp Leu Gln Glu Thr Ser Leu  
54 115 120 125  
55 Ala Gly Val Ala Asn Gln Leu Leu Asp Arg Phe Ile Phe Glu Asp Gln

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56      130      135      140
57 Ile Arg Pro Gln Asp Arg Glu Glu Leu Leu Arg Ala Leu Leu Leu Lys
58 145      150      155      160
59 His Ser His Ala Gly Glu Leu Glu Ala Leu Gly Gly Val Lys Pro Ala
60      165      170      175
61 Val Leu Thr Arg Ser Gly Asp Pro Ser Gln Pro Leu Leu Pro Gln His
62      180      185      190
63 Ser Ser Leu Glu Thr Gln Leu Phe Cys Glu Gln Gly Asp Gly Gly Thr
64      195      200      205
65 Glu Gly His Ser Pro Ser Gly Ile Leu Glu Lys Ile Pro Pro Asp Ser
66      210      215      220
67 Glu Ala Thr Leu Val Leu Val Gly Arg Ala Asp Phe Leu Glu Gln Pro
68 225      230      235      240
69 Val Leu Gly Phe Val Arg Leu Gln Glu Ala Ala Glu Leu Glu Ala Val
70      245      250      255
71 Glu Leu Pro Val Pro Ile Arg Phe Leu Phe Val Leu Leu Gly Pro Glu
72      260      265      270
73 Ala Pro His Ile Asp Tyr Thr Gln Leu Gly Arg Ala Ala Thr Leu
74      275      280      285
75 Met Ser Glu Arg Val Phe Arg Ile Asp Ala Tyr Met Ala Gln Ser Arg
76      290      295      300
77 Gly Glu Leu Leu His Ser Leu Glu Gly Phe Leu Asp Cys Ser Leu Val
78 305      310      315      320
79 Leu Pro Pro Thr Asp Ala Pro Ser Glu Gln Ala Leu Leu Ser Leu Val
80      325      330      335
81 Pro Val Gln Arg Glu Leu Leu Arg Arg Arg Tyr Gln Ser Ser Pro Ala
82      340      345      350
83 Lys Pro Asp Ser Ser Phe Tyr Lys Gly Leu Asp Leu Asn Gly Gly Pro
84      355      360      365
85 Asp Asp Pro Leu Gln Gln Thr Gly Gln Leu Phe Gly Gly Leu Val Arg
86      370      375      380
87 Asp Ile Arg Arg Arg Tyr Pro Tyr Tyr Leu Ser Asp Ile Thr Asp Ala
88 385      390      395      400
89 Phe Ser Pro Gln Val Leu Ala Ala Val Ile Phe Ile Tyr Phe Ala Ala
90      405      410      415
91 Leu Ser Pro Ala Ile Thr Phe Gly Gly Leu Leu Gly Glu Lys Thr Arg
92      420      425      430
93 Asn Gln Met Gly Val Ser Glu Leu Leu Ile Ser Thr Ala Val Gln Gly
94      435      440      445
95 Ile Leu Phe Ala Leu Leu Gly Ala Gln Pro Leu Leu Val Val Gly Phe
96      450      455      460
97 Ser Gly Pro Leu Leu Val Phe Glu Glu Ala Phe Phe Ser Phe Cys Glu
98 465      470      475      480
99 Thr Asn Gly Leu Glu Tyr Ile Val Gly Arg Val Trp Ile Gly Phe Trp
100      485      490      495
101 Leu Ile Leu Leu Val Val Leu Val Val Ala Phe Glu Gly Ser Phe Leu
102      500      505      510
103 Val Arg Phe Ile Ser Arg Tyr Thr Gln Glu Ile Phe Ser Phe Leu Ile
104      515      520      525

```

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```

105 Ser Leu Ile Phe Ile Tyr Glu Thr Phe Ser Lys Leu Ile Lys Ile Phe
106      530      535      540
107 Gln Asp His Pro Leu Gln Lys Thr Tyr Asn Tyr Asn Val Leu Met Val
108 545      550      555      560
109 Pro Lys Pro Gln Gly Pro Leu Pro Asn Thr Ala Leu Leu Ser Leu Val
110      565      570      575
111 Leu Met Ala Gly Thr Phe Phe Phe Ala Met Met Leu Arg Lys Phe Lys
112      580      585      590
113 Asn Ser Ser Tyr Phe Pro Gly Lys Leu Arg Arg Val Ile Gly Asp Phe
114      595      600      605
115 Gly Val Pro Ile Ser Ile Leu Ile Met Val Leu Val Asp Phe Phe Ile
116      610      615      620
117 Gln Asp Thr Tyr Thr Gln Lys Leu Ser Val Pro Asp Gly Phe Lys Val
118 625      630      635      640
119 Ser Asn Ser Ser Ala Arg Gly Trp Val Ile His Pro Leu Gly Leu Arg
120      645      650      655
121 Ser Glu Phe Pro Ile Trp Met Met Phe Ala Ser Ala Leu Pro Ala Leu
122      660      665      670
123 Leu Val Phe Ile Leu Ile Phe Leu Glu Ser Gln Ile Thr Thr Leu Ile
124      675      680      685
125 Val Ser Lys Pro Glu Arg Lys Met Val Lys Gly Ser Gly Phe His Leu
126      690      695      700
127 Asp Leu Leu Leu Val Val Gly Met Gly Gly Val Ala Ala Leu Phe Gly
128 705      710      715      720
129 Met Pro Trp Leu Ser Ala Thr Thr Val Arg Ser Val Thr His Ala Asn
130      725      730      735
131 Ala Leu Thr Val Met Gly Lys Ala Ser Thr Pro Gly Ala Ala Gln
132      740      745      750
133 Ile Gln Glu Val Lys Glu Gln Arg Ile Ser Gly Leu Leu Val Ala Val
134      755      760      765
135 Leu Val Gly Leu Ser Ile Leu Met Glu Pro Ile Leu Ser Arg Ile Pro
136      770      775      780
137 Leu Ala Val Leu Phe Gly Ile Phe Leu Tyr Met Gly Val Thr Ser Leu
138 785      790      795      800
139 Ser Gly Ile Gln Leu Phe Asp Arg Ile Leu Leu Leu Phe Lys Pro Pro
140      805      810      815
141 Lys Tyr His Pro Asp Val Pro Tyr Val Lys Arg Val Lys Thr Trp Arg
142      820      825      830
143 Met His Leu Phe Thr Gly Ile Gln Ile Ile Cys Leu Ala Val Leu Trp
144      835      840      845
145 Val Val Lys Ser Thr Pro Ala Ser Leu Ala Leu Pro Phe Val Leu Ile
146      850      855      860
147 Leu Thr Val Pro Leu Arg Arg Val Leu Leu Pro Leu Ile Phe Arg Asn
148 865      870      875      880
149 Val Glu Leu Gln Cys Leu Asp Ala Asp Asp Ala Lys Ala Thr Phe Asp
150      885      890      895
151 Glu Glu Glu Gly Arg Asp Glu Tyr Asp Glu Val Ala Met Pro Val
152      900      905      910
155 <210> SEQ ID NO: 3

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## RAW SEQUENCE LISTING

DATE: 02/22/2002

PATENT APPLICATION: US/10/066,320

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Input Set : A:\1818.1030-003 seq listing.txt

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156 <211> LENGTH: 201
157 <212> TYPE: PRT
158 <213> ORGANISM: Homo sapiens
160 <400> SEQUENCE: 3
161 Met Glu Glu Leu Gln Asp Asp Tyr Glu Asp Met Met Glu Glu Asn Leu
162 1 5 10 15
163 Glu Gln Glu Glu Tyr Glu Asp Pro Asp Ile Pro Glu Ser Gln Met Glu
164 20 25 30
165 Glu Pro Ala Ala His Asp Thr Glu Ala Thr Ala Thr Asp Tyr His Thr
166 35 40 45
167 Thr Ser His Pro Gly Thr His Lys Val Tyr Val Glu Leu Gln Glu Leu
168 50 55 60
169 Val Met Asp Glu Lys Asn Gln Glu Leu Arg Trp Met Glu Ala Ala Arg
170 65 70 75 80
171 Trp Val Gln Leu Glu Glu Asn Leu Gly Glu Asn Gly Ala Trp Gly Arg
172 85 90 95
173 Pro His Leu Ser His Leu Thr Phe Trp Ser Leu Leu Glu Leu Arg Arg
174 100 105 110
175 Val Phe Thr Lys Gly Thr Val Leu Asp Leu Gln Glu Thr Ser Leu
176 115 120 125
177 Ala Gly Val Ala Asn Gln Leu Leu Asp Arg Phe Ile Phe Glu Asp Gln
178 130 135 140
179 Ile Arg Pro Gln Asp Arg Glu Glu Leu Leu Arg Ala Leu Leu Leu Lys
180 145 150 155 160
181 His Ser His Ala Gly Glu Leu Glu Ala Leu Gly Gly Val Lys Pro Ala
182 165 170 175
183 Val Leu Thr Arg Ser Gly Asp Pro Ser Gln Pro Leu Leu Pro Gln His
184 180 185 190
185 Ser Ser Leu Glu Thr Gln Leu Phe Cys
186 195 200
189 <210> SEQ ID NO: 4
190 <211> LENGTH: 317
191 <212> TYPE: PRT
192 <213> ORGANISM: Homo sapiens
194 <400> SEQUENCE: 4
195 Met Glu Glu Leu Gln Asp Asp Tyr Glu Asp Met Met Glu Glu Asn Leu
196 1 5 10 15
197 Glu Gln Glu Glu Tyr Glu Asp Pro Asp Ile Pro Glu Ser Gln Met Glu
198 20 25 30
199 Glu Pro Ala Ala His Asp Thr Glu Ala Thr Ala Thr Asp Tyr His Thr
200 35 40 45
201 Thr Ser His Pro Gly Thr His Lys Val Tyr Val Glu Leu Gln Glu Leu
202 50 55 60
203 Val Met Asp Glu Lys Asn Gln Glu Leu Arg Trp Met Glu Ala Ala Arg
204 65 70 75 80
205 Trp Val Gln Leu Glu Glu Asn Leu Gly Glu Asn Gly Ala Trp Gly Arg
206 85 90 95
207 Pro His Leu Ser His Leu Thr Phe Trp Ser Leu Leu Glu Leu Arg Arg
208 100 105 110

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```

209 Val Phe Thr Lys Gly Thr Val Leu Leu Asp Leu Gln Glu Thr Ser Leu
210      115      120      125
211 Ala Gly Val Ala Asn Gln Leu Leu Asp Arg Phe Ile Phe Glu Asp Gln
212      130      135      140
213 Ile Arg Pro Gln Asp Arg Glu Glu Leu Leu Arg Ala Leu Leu Leu Lys
214 145      150      155      160
215 His Ser His Ala Gly Glu Leu Glu Ala Leu Gly Gly Val Lys Pro Ala
216      165      170      175
217 Val Leu Thr Arg Ser Gly Asp Pro Ser Gln Pro Leu Leu Pro Gln His
218      180      185      190
219 Ser Ser Leu Glu Thr Gln Leu Phe Cys Glu Gln Gly Asp Gly Gly Thr
220      195      200      205
221 Glu Gly His Ser Pro Ser Gly Ile Leu Glu Lys Ile Pro Pro Asp Ser
222      210      215      220
223 Glu Ala Thr Leu Val Leu Val Gly Arg Ala Asp Phe Leu Glu Gln Pro
224 225      230      235      240
225 Val Leu Gly Phe Val Arg Leu Gln Glu Ala Ala Glu Leu Glu Ala Val
226      245      250      255
227 Glu Leu Pro Val Pro Ile Arg Phe Leu Phe Val Leu Leu Gly Pro Glu
228      260      265      270
229 Ala Pro His Ile Asp Tyr Thr Gln Leu Gly Arg Ala Ala Ala Thr Leu
230      275      280      285
231 Met Ser Glu Arg Val Phe Arg Ile Asp Ala Tyr Met Ala Gln Ser Arg
232      290      295      300
233 Gly Glu Leu Leu His Ser Leu Glu Gly Phe Leu Asp Cys
234 305      310      315

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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/066,320

DATE: 02/22/2002

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Input Set : A:\1818.1030-003 seq listing.txt

Output Set: N:\CRF3\02222002\J066320.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application No

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date